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CLAIMS

What is claimed is:

1. A method of manufacturing compartmented file folders, which comprises the steps of:

mechanically conveying to work stations of a production line: file folder
10 components comprising feedstock folder front and back panels and at least a first internal divider; and,

at one of the work stations: (a) employing a file folder alignment mechanism to mechanically align the first internal divider with a second of the file folder
components, and (b) employing a second mechanism to secure an internal divider edge
15 to a complementary edge of the second file folder component;

employing a conveyor mechanism to move the secured, first internal divider and the feedstock folder to a second work station; and

at the second work station, employing a third mechanism to secure the edge of the first internal divider to a complementary edge of a third of the file folder components.

5 2. A method as defined in claim 1 wherein the second file folder component is a feedstock folder back panel.

3. A method as defined in claim 1 wherein the third file folder component is a feedstock folder front panel.

4. A method as defined in claim 1 wherein the second and third file folder
10 components are front and back feedstock folder panels.

5. A method as defined in claim 1 wherein one of the second and third file folder components is a feedstock folder panel and the other of those components is an internal divider.

6. A method as defined in claim 1 wherein:

15 apposed edges of the front and back feedstock folder panels are taped together to form a hinge extending along a spine of the feedstock folder;

 a file folder component to which the first internal divider is secured is one of the feedstock folder panels; and

 the internal divider edge is secured to the feedstock folder panel edge with a
20 mechanical arrangement comprising a tape transfer mechanism having the capability of

5 laying a tape segment on the internal divider and the feedstock folder panel with the tape
extending between the complementary edges of and lapping onto the internal divider and
the feedstock folder panel.

7. A method as defined in claim 6 which includes the step of passing the feedstock
folder and the internal divider or dividers between press components to strengthen the
10 bond formed between each tape segment and the file folder components onto which that
tape segment laps.

8. A method as defined in claim 1 wherein:

both the second and third file folder components are internal dividers; and

the edge of the first internal divider is secured to complementary edges of the
15 second and third folder components with mechanisms having the capability of laying
tape segments on the first internal divider and the second and third file folder
components with the tape segments respectively extending between and lapping onto the
first internal divider and the second and third file folder components.

9. A method as defined in claim 8 wherein each tape segment laying mechanism
20 comprises a rotating, tape conveying, vacuum component and a knife for cutting the
tape segment from a tape vacuum adhered to the vacuum component.

5 10. A method as defined in claim 9 wherein:

the tape is coated with a fluid activatable adhesive; and

an activating fluid is brought into contact with the adhesive while each tape
segment is on the tape conveying vacuum component.

11. A method as defined in claim 8 for manufacturing a file folder which has at least
10 two internal dividers.

12. A method as defined in claim 1 wherein:

complementary edges of the feedstock folder front and rear panels are joined
along a spine of the feedstock folder with a first tape segment;

the internal divider or dividers are secured to the second and third folder
15 components with an additional tape segment or segments; and

the feedstock folder with the secured internal divider or dividers is conveyed to a
pleating station equipped with components having the capability of forming pleats in at
least one of the first and additional tape segments such that a file folder compartment
defined by file folder components joined by that tape segment can be expanded from a
20 minimum capacity configuration to a configuration of greater capacity.

5 13. A method as defined in claim 12 wherein the pleating station is equipped with mechanical components having the capability of forming pleats in all tape segments joining folder components.

14. A method as defined in claim 1 wherein each internal divider is conveyed to a work station from an internal divider repository with a mechanical arrangement
10 comprising a vacuum pickoff and transfer mechanism for removing the internal divider from the repository and then conveying the removed internal divider to the work station where the internal divider is secured to a second file folder component.

15. A method as defined in claim 1 wherein the production line has one or more systems for moving feedstock folders and internal dividers to work stations and from one
15 work station to another without human handling of the feedstock folders or the internal dividers.

16. A method as defined in claim 15 wherein:

the production line is equipped with a pleating station having the capability of forming pleats in a tape segment such that a file folder compartment defined by the file
20 folder components joined by that tape segment can be expanded from a minimum capacity configuration to a configuration of greater capacity; and

5 the production line has the capability of moving feedstock folders and the internal divider or dividers secured to folder components from a work station to the pleating station without human handling of the feedstock folder and folder component-secured internal divider or dividers.

17. A method as defined in claim 1 for manufacturing a file folder which has two
10 internal dividers.

18. A method of manufacturing a compartment file folder on an assembly line in a single pass from a feedstock folder, said method comprising the steps of:

 providing an assembly line which has work stations with tape segment forming and applying machinery for taping together: (a) a front panel of the feedstock folder and
15 a divider, and (b) a rear panel of the feedstock folder and a divider;

 employing a conveyor system to feed the feedstock folder seriatim through the work stations; and

 employing a divider transfer mechanism to feed the divider to the work stations in timed relationship to the arrival of a feedstock folder at that station.

20 19. A method as defined in claim 18 in which:

5 a single divider is fed to a work station of the assembly line for each feedstock folder fed through the assembly line, and the divider is taped to the front panel of the feedstock folder with a first tape segment and to the rear panel of the feedstock folder with a second tape segment.

20. A method as defined in claim 19:

10 which includes the step of equipping the assembly line with a pleating section;

 employing first creasing components of the pleating section to form creases in the first tape segment which accommodate expansion of a first compartment between the feedstock folder front panel and the divider; and

 employing second creasing components of the pleating section to form creases in
15 the second tape segment which accommodate expansion of a second compartment between the divider and the rear folder panel.

21. A method as defined in claim 18 which includes the steps of:

 feeding first and second dividers to work stations of the assembly line in timed arrival to the arrival of one particular feedstock folder at those work stations; and

5 employing first, second, and third work station tape segment forming and
applying mechanisms to respectively: (a) tape the first divider to one of the feedstock
folder panels; (b) tape the second divider to the other of the feedstock folder panels; and
(c) tape the first divider to the second divider.

22. A method as defined in claim 21:

10 which includes the step of equipping the assembly line with a pleating section;

 employing first creasing components of the pleating section to form creases in the
first tape segment which accommodate expansion of a first compartment between the
feedstock folder front panel and the divider;

 employing second creasing components of the pleating section to form creases in
15 the second tape segment which accommodate expansion of a second compartment
between the divider and the rear folder panel; and

 employing third creasing components of the pleating section to form creases in
the third tape segment which accommodate expansion of a compartment between the
first and second dividers.

5 23. A method of manufacturing a compartmented file folder from a feedstock folder having front and rear panels, said method comprising the steps of:

 providing an assembly line which has a divider installation station with mechanism for taping an internal divider between the front and rear panels of the feedstock folder;

10 moving the feedstock folder through the divider installation station with a single pass feedstock folder transport device which has at least one feedstock folder propelling component;

 delivering the internal divider to the divider installation station with a divider transfer mechanism in timed relationship to the arrival of the feedstock folder at the
15 station; and

 aligning one edge of the internal divider relative to a complementary edge of a feedstock folder panel with a divider alignment arrangement as the internal divider arrives at the divider installation station.

24. A method as defined in claim 23 which also comprises the step of incorporating
20 in the assembly line a pleating section comprising first and second components for

- 5 forming creases in tapes joining together: (a) the internal divider and the feedstock folder front panel, and (b) the internal divider and the feedstock folder rear panel.

25. A method as defined in claim 23 which comprises the steps of:

delivering a second internal divider to the assembly line; and

employing taping mechanisms to tape the second internal divider between the
10 first-mentioned internal divider and one of the feedstock folder panels.

26. A method as defined in claim 25:

which also includes the step of incorporating in the assembly line a pleating
section comprising first, second, and third components for forming creases in tapes
joining together: (a) the first of the internal dividers and one of the feedstock folder
15 panels, (b) the second internal divider and the other of the feedstock folder panels, and
(c) the first and second internal dividers.

27. A method of manufacturing a file folder which has: (a) at least one internal
divider, and (b) first and second panels taped together to form a hinge extending along a
spine of the file folder, said method comprising the steps of:

5 employing a divider/file folder panel alignment mechanism to mechanically
position an internal divider relative to the first file folder panel with one side of the
internal divider and one side of the first file folder panel exposed and apposed marginal
edges of the internal divider and the first file folder panel exposed and juxtaposed;

 securing the internal divider to the first file folder panel with a first tape which
10 extends in the same direction as the hinge of the file folder using a mechanical
arrangement comprising a tape transfer mechanism having the capability of laying the
first tape on the internal divider and the first file folder panel with the tape extending
between and lapping onto the internal divider and the first file folder panel;

 then turning the internal divider with a stationary component manipulation
15 mechanism to expose a second side of the internal divider; and

 securing the internal divider to the second file folder panel with a second tape
which extends in the same direction as the hinge of the file folder using a second
mechanical arrangement comprising a tape transfer mechanism having the capability of
laying a second tape on the internal divider and the second file folder panel with the tape
20 extending between and lapping onto the internal divider and the second file folder panel.

5 28. A method of manufacturing a file folder which has: (a) at least first and second internal dividers, and (b) first and second panels taped together to form a hinge extending along a spine of the file folder, said method comprising the steps of:

employing a first divider/file folder panel alignment mechanism to mechanically position a first internal divider relative to the first file folder panel with one side of the
10 first internal divider and one side of the first file folder panel exposed and apposed marginal edges of the first internal divider and the first file folder panel exposed and juxtaposed;

securing the first internal divider to the first folder panel with a first tape which extends in the same direction as the hinge of the file folder using a mechanical
15 arrangement comprising a tape transfer mechanism having the capability of laying the first tape on the first internal divider and the first file folder panel with the tape extending between and lapping onto the first internal divider and the first file folder panel;

then turning the first internal divider with a component manipulation mechanism
20 to expose a second side of the first internal divider;

employing a second divider/file folder panel alignment mechanism to mechanically position a second internal divider relative to the first internal divider with a

5 first side of the second internal divider and the second side of the first internal divider
exposed and apposed marginal edges of the first and second internal dividers exposed
and juxtaposed;

securing the second internal divider to the first internal divider with a second tape
extending in the same direction as the hinge of the file folder using a second mechanical
10 arrangement comprising a tape transfer mechanism having the capability of laying the
second tape on the first and second internal dividers with the second tape extending
between and lapping onto the marginal edges of the first and second internal dividers;

then turning the second internal divider with a further component manipulation
mechanism to expose a second side of the second internal divider and one side of the
15 second file folder panel; and

securing the second internal divider to the second file folder panel with a third
tape which extends in the same direction as the hinge of the file folder using a third
mechanical arrangement comprising a tape transfer mechanism having the capability of
laying the third tape on the second internal divider and the second file folder panel with
20 the tape extending between and lapping onto the second internal divider and the second
file folder panel.